

Appl. No.: 10/728,349
Amdt. dated 05/10/2005
Reply to Office action of February 10, 2005

Amendments to the Claims:

Please cancel Claims 4 and 8 and amend Claims 1, 3, 5-7, and 11 as follows:

1. (currently amended) A method for communicating between a bus controller and a at least one data data channel via a common digital bus, the method comprising:

transmitting a first message from the bus controller to the at least one data channel at a predetermined bit rate selected from a plurality of possible bit rates;

receiving the first message at the at least one data channel;

determining from the plurality of possible bit rates the predetermined bit rate at which the first message was transmitted upon receipt of the first message by the at least one data channel, where the determination is made independent of a synchronous clock signal from the bus controller; and

transmitting a second message from the at least one data channel to the bus controller in response to the first message at the same predetermined bit rate; and

~~altering the predetermined bit rate and repeating said steps of transmitting the first message, determining the predetermined bit rate, and transmitting the second message.~~

2. (original) A method according to Claim 1 further comprising receiving the second message at the bus controller at the same predetermined bit rate independent of a synchronous clock signal.

3. (currently amended) A method according to Claim 1, wherein the first message is further comprising transmitting an example message, which is used by said determining step to determine the predetermined bit rate from the bus controller to the at least one data channel at an altered bit rate following alteration of the predetermined bit rate and prior to transmission of the first message by the bus controller such that the altered bit rate can be determined upon receipt of the example message by the at least one data channel.

4. (canceled).

Appl. No.: 10/728,349
Amdt. dated 05/10/2005
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5. (currently amended) A system for facilitating communications between a bus controller and at least one data channel via a common digital bus, the system comprising:
a bus controller connected to said common digital bus; and
a network device interface connected between the common digital bus and an associated data channel,

wherein said bus controller transmits a first message to said network device interface at a predetermined bit rate selected from a plurality of possible bit rates,

wherein said network device interface receiving the first message and determines from the plurality of possible bit rates the predetermined bit rate at which the first message was transmitted upon receipt of the first message independent of a synchronous clock signal from said bus controller,

wherein said network device interface transmits a second message to said bus controller in response to the first message at the same predetermined bit rate, and

wherein said bus controller alters the predetermined bit rate, and
~~wherein said bus controller and network device interface repeat transmission of the first message, determination of the predetermined bit rate, and transmission of the second message at the altered predetermined bit rate.~~

6. (currently amended) A system according to Claim 5, wherein said ~~bus~~ bus controller receives the second message at the bus controller at the same predetermined bit rate independent of a synchronous clock signal.

7. (currently amended) A system according to Claim 5, wherein the first message transmitted by said bus controller is an ~~transmits an example message, and wherein said network device interface uses the example message to determine the predetermined bit rate to the network device interface at an altered bit rate following alteration of the predetermined bit rate and prior to transmission of the first message by the bus controller such that the altered bit rate can be determined upon receipt of the example message by said network device interface.~~

8. (canceled).

Appl. No.: 10/728,349
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9. (original) A system according to Claim 5, wherein said network device interface uses the predetermined bit rate to communicate with the data channel associated therewith.

10. (original) A network device interface adapted to interconnect a bus controller with an associated data channel via a common digital bus, the network device interface comprising:

a receiver for receiving messages from the bus controller via the common digital bus;
a device interface for providing commands to the associated data channel in response to messages received by said receiver and for receiving data from the associated data channel; and
a transmitter for transmitting messages to the bus controller via the common digital bus,
wherein said receiver comprises a clock detector for determining if synchronous clock signals are provided with the message and a bit rate detector for determining a bit rate at which the messages are received, wherein said transmitter transmits messages at the same bit rate at which messages are received, if said clock detector determines that the messages that are received are without any accompanying synchronous clock signals, and wherein said transmitter is capable of altering the bit rate at which messages are transmitted in accordance with alterations of the bit rate at which messages are received.

11. (currently amended) A network device interface according to Claim 10 wherein the first message is said receiver receives an example message from the bus controller and said bit rate detector uses the example message to determine the predetermined bit rate at an altered bit rate following alteration of the predetermined bit rate and prior to receipt of the first message at the altered bit rate such that said bit rate detector can determine the altered bit rate at which the example message is received.